

# BAA Update

*Obituary*

## Donald A. Campbell, 1902-1997

Donald Archibald Campbell was born in Kilburn on 1902 August 1. His mother died when he was two years old and he then moved with his father first to Wembley in 1906 and then to Fulham in 1912. When his father enlisted at the beginning of the First World War, Don, at the age of 12, moved to live with his aunt at Duffield, Derby.

After his father married again the family increased and Don gained four step-brothers and one stepsister, with whom he found much happiness. He kept in touch with them, together with a large circle of friends, throughout his long and eventful life. Don's mother and father were both musicians. His



Donald Campbell in 1992, aged 90.

father managed a music shop in London which gave Don access to musical instruments and the music he so enjoyed, an interest which was never to leave him. He played several instruments, mastering the cello more seriously than others, and for some years played in the St Albans Symphony Orchestra as well as the DoUis Hill orchestra under the baton of Dr Eric Speight.

Don viewed Halley's Comet for the first time in 1910 through his father's telescope from their Wembley home: he was delighted to see the comet again in 1986. It is a matter of great regret that he did not live to see Comet Hale-Bopp.

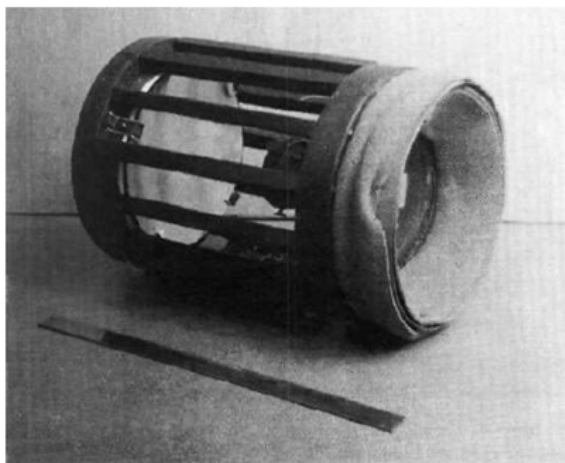
After his school years Don gained an apprenticeship with Newton Bros., Electrical Engineers, of Derby, whose principal claim to fame was the R34 airship radio generators. In later life he renewed his interest in radio transmission and reception.

In September 1925 Don joined the Post Office as an engineer based in Derby but rapid promotion resulted in his being appointed to a more senior position at Bamsley, although he still commuted to Duffield. During this period in 1928 he met and married his wife Lilian. Don was transferred to the Post Office Engineer Chief's circuit laboratory in Newgate, London but on being promoted to Experimental Officer at the Post Office Research Station, DoUis Hill, he and Lilian moved to Park Street Village, near St Albans in Hertfordshire. In 1944 Lilian gave birth to their daughter Fay, their first and only child.

With the outbreak of World War II the Research Station at Dollis Hill was quickly committed to war effort activities, and Don became involved in a secret project under the direction of Dr Arnold Lynch. Although he was not officially aware of the purpose of their work it was apparent that it was of considerable importance. In fact it was the design of a scanning system to read teleprinter tape at high speed. Don's part in this was, among other things, to mount small photoelectric cells originally designed for use in anti-aircraft shells, into octal bases and to arrange them into an array of 13 PECs. This, they later learned, was the core of 'Colossus', the computer which was being built at Dollis Hill and which successfully deciphered the German 'Fish' teleprinter traffic at Bletchley Park. Don's name is recorded with others of his colleagues in the book *Codebreakers*.

Don also worked on the development of equipment capable of detecting buried casualties with microphones and sound sensors, and in the broadcast of synthetic talks between night fighters - a ploy to convince the enemy that the RAF had more night fighters than in fact existed. Other projects included work on the speaking clock, submarine cables, electronic postal sorting and transistor testing. He stayed at Dollis Hill for the remainder of his long working career, retiring in 1968 aged 66. Don died on 1997 February 11.

In 1933 Donald Campbell joined the BAA and remained an active observing member for the rest of his life. He was a lively member of the Meteor Section and spent many hours in a deckchair recording observations of meteor showers and radiants, a project which enabled him to visit and participate in the early construction of equipment at Jodrell Bank. He was Papers Secretary from 1951 to 1960 and President from 1964 to 1966. He was



Don Campbell's Schmidt camera, with 12-inch scale strip. (M. J. Hendrie)

appointed Fellow of the Royal Astronomical Society in 1948. Not only was Don Campbell a dedicated amateur astronomer, but he is remembered by many for his help and guidance to newcomers joining the BAA, and his enthusiasm in persuading many to become active observers themselves and join in and participate in the work of the Sections.

As well as his commitment to the BAA and the Meteor Section in particular, Don embraced a wide range of other interests. Together with Gil Hayward, he was one of the first people to construct a Schmidt camera, which had some three inches aperture and a focal ratio of f/0.8. This was used to photograph St Albans Cathedral at dusk, producing a remarkably sharp picture in very poor light, which brought many admiring comments at the Exhibition Meeting in 1944. Don subsequently mounted it in a quart paint tin and used it to photograph meteor trails. Another Schmidt camera, with a mirror diameter 150mm, correcting plate diameter 100mm and nominal focal length 90-100mm (illustrated) had a plate scale around 2200"/7mm and was also used to photograph meteor trails.

Don constructed a pendulum clock resembling the Short Synchrotime model, incorporating an invar rod, which was accurate to something like one second in eight days. He made a seismograph on the Shaw pattern which recorded the tremors due to traffic climbing the hill on the road from Watford to St Albans. He was a member of his local scientific society which embraced a microscopy section, and Hayward remembers his delight in taking apart the droppings of a skylark to find what sort of insects the bird had been catching at high altitude. He captured snowflakes in plastic pellicles on microscope slides so that their intricacies could be examined under magnification. And he photographed lightning during thunderstorms, being particularly pleased by blobs that indicated strokes coming straight towards him. He took regular sunspot photographs using printing paper as a negative, and later the Orion Nebula using a lens he had ground from the bottom of a milk bottle. He was interested in fossils and geology, and it is reported that on a coach tour of Scotland he caused the coach to be stopped and the passengers to get out and help him search for fossils which he knew were to be found in the area.

On 1980 July 10 his wife of 51 years passed

away and was very much missed. However his grandchildren were a delight to him and he devoted much time to making things for them. One of the latest was a radio controlled submarine, primarily for his grandson Dominic to enjoy, and together they would transport it in a pram (it was quite large) to a local pond or the local river Ver to put it through its paces.

Don was a keen short wave listener and regularly each morning would get up early to switch on his radio and listen to transmissions; typically he recorded all the details of what he heard, call signs, times and places. He was particularly pleased when he could listen in to New Zealand where many members of his family now lived. He enjoyed painting, and as in all that he did, became accomplished as an artist in water colours. His imaginative pictures of toadstools and fairies were quite delightful. Until his later years he would paint Christmas cards to send to his friends; they were always amusing and invariably had an astronomical theme.

The picture that emerges is that of a knowledgeable, kindly, family man, always willing to assist and advise more junior colleagues and to take his share of responsibility in any organisation he embraced. Donald Campbell will be remembered as one of the band of dedicated observers of the immediate post war years who contributed greatly to the BAA throughout his more than 60 years of membership. He published many papers in the *Journal*.

I must acknowledge with grateful thanks, the help and advice I have received from many of his friends, colleagues, and particularly his family. I should like to mention especially Gil Hayward, Michael Hendrie, Jim Hysom, Reg Taylor, Joe Young and Pat Barber, who have been of the greatest assistance in assembling official records and the personal anecdotes which do so much to recall Don's life and career.

J. C. D. Marsh

## References

A selection of some of D. A. Campbell's many contributions to the *Journal* is given below:

- 1 *Tektites*, 64(8), 1954
- 2 *The evaporation of metallic films and the deposition of anti-reflection films on glass*, 64(4), 1955
- 3 *Photography of lightning*, 66(2), 1956
- 4 *Silver and aluminium coatings on mirrors*, 66(5), 1956
- 5 *Samuel Pepys and optical matters*, 67(3), 1957
- 6 *Henry the Navigator*, 69(6/8), Pt. II, 1959
- 7 *Signal transmission across the Atlantic via a passive satellite*, *Echo* 1, 71(2), 1961
- 8 *Cosmic Rays*, 76(1), 1965
- 9 *St William Muggins*, 77(1), 1966